



**Queenscliffe
Sustainable
Living Guide**



Home Food Garden House Products Transport Waste **SME**

Council Home

Upgrade to energy efficient lighting

Configure your lighting for efficiency

Implement efficient air conditioning and heating

Switch off un-used appliances

Maintain, downsize and turn off your fridge

Purchase energy efficient appliances

Install a renewable energy system

Purchase Energy Efficient vehicles

Teach energy efficient driving

Offer alternatives to the car

Use your recycled printer paper twice

Establish a recycling program

Conserve water in your business

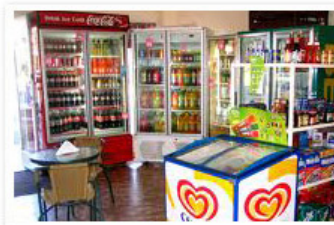
Install water tanks connected to toilets

Optimise specialist equipment for energy efficiency

Maintain, downsize and turn off your fridge

Refrigerators and cool rooms consume a lot of energy. The benefit of bringing them up to best practice efficiency is a heavy financial and environmental reward.

Fridges require large amounts of power, and for those businesses with significant refrigeration needs, this is a expensive ongoing cost. However, energy savings of 20% can generally be obtained from regular maintenance and prudent use of refrigerators.



In certain Industries, refrigeration can be responsible for up to 85% of total energy consumption, depending on the industry sector: Liquid milk processing 25%; Breweries 35%; Confectionery 40%; Chilled ready meals 50%; Frozen food 60%; Cold storage 85%. (Source: [Energy Efficiency Best Practice Guide - Industrial Refrigeration](#) by Sustainability Victoria)

So tune up your fridges and save money today.

How to do it now!

For many shops, restaurants and service businesses, refrigeration is a large component of their energy bill. The following tips will ensure your refrigeration system is running at it's most efficient:

Replace poor fridge door seals.

Age and use can cause fridge door seals to decay and let the cold air out. A poor fridge door seal results in the refrigerator having to work harder (i.e. consume more power) to maintain the level of cold it is set for. Door seals are available from most fridge manufacturers and hardware stores, and can be replaced by you or a refrigeration service technician can do this for you.

Ensure your refrigeration unit(s), or cool room, is regularly maintained.

Like any piece of machinery, fridges work most efficiently when maintained. A general maintenance every 6 months, by a qualified technician, should include:

- Check to ensure door seals are functioning efficiently.
- Clean compressor fans to ensure they are free of dust. Use a vacuum or broom to remove dust build up.
- Remove scaling and ice build-up on evaporator fins.
- Service and lubricate compressor units.
- Ensure control settings remain at optimum levels (i.e. temperature settings). Set fridge thermostats to 5°C. Set freezer thermostats to -15°C. Every degree lower than this will add 3% to running costs.

If your business has significant refrigeration needs, it would benefit from a comprehensive audit of the refrigeration system's efficiency by engaging a specialist to assist. The [Best practice Refrigeration manual](#) explores some of the optimization options available in larger commercial refrigeration systems.

Align your refrigeration size to your needs.

Ensure fridge is 2/3 full at all times and turn off any refrigeration units that are idle. If your ongoing needs are smaller than the fridge you have, consider downsizing your refrigerator with a more efficient model. A database of the Energy ratings of current fridges can be found on the [E3 Equipment Energy Efficiency](#) site.

If you are getting rid of your old fridge consider donating it to a charity:

- [Phoenix Fridges](#) – this Brotherhood of St Laurence initiative collects fridges in Melbourne, repairs and refurbishes them and sells them from their community stores to low-income families.

Install a 24-hour timer on drinks fridges.

Most fridges take approximately 30 min to cool down to their set temperature, so fridges with non-perishables (i.e. soft drinks, beer, etc...) can be auto switched off at night and on the weekend to save approximately \$300 p.a. Timers are available from hardware stores and electronics suppliers and are easily set up.

Environment

Reducing your business's energy use, you directly reduce your business's contribution to climate change and shift our thinking towards how we can exist beside nature rather than assuming nature will always provide for us.

Wellbeing

Making your refrigeration system as efficient as possible will help to drive the transition to a low-carbon economy, save you money and allow you to do your bit to fight climate change. That's got to make you feel good.

Position your fridge away from sunlight and heat.

Refrigerators work best in cool positions with plenty of air circulation.

How much will it save?

An inefficient one star fridge (single door 300-400 litres) over a 10 year life span, will consume \$250 more power than a three star equivalent. A badly maintained one would consume an additional 20% power or be \$140 more expensive to run. Commercial fridges or multiple refrigerators will increase the cost of these inefficiencies as would an increase in the price of electricity.

How did we calculate this?

According to the [Carbon Trust](#), cost savings of 20% or more can be achieved by ensuring that the refrigeration system/plant is well operated and maintained. The above calculations are based on the Refrigeration database tool on the [E3 Equipment Energy Efficiency](#) site. Cost to implement It is recommended that refrigerators are maintained every six months, and can only take 30 minutes to complete. Fridge seals can cost around \$60 to replace. The cost of purchasing a higher star rated fridge varies but can be offset if one purchases a slightly smaller unit, furthering the reduction in energy costs.

Further information

- [Refrigeration System - Guide to key energy saving opportunities](#) (Carbon Trust - UK)
- [Best Practice Refrigeration manual](#) (Resource Smart - VIC)
- [How to avoid refrigerator repairs](#) (The Family Handyman - USA)

Why is this action important?

A refrigerator is a power hungry appliance, that can be maintained and used better to deliver easy energy efficiency gains. By reducing energy use you save the associated costs, both financial and environmental.

For those businesses using several fridges or a cool room, these benefits can be significant, and by approaching best practice in your industry you will better compete and increase your profits.